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ABSTRACT

This paper suggests that the general physical education curriculum in colleges and universities should reflect the changing attitudes toward physical activity in our society. A program of physical education should provide a series of guidelines to the student that will become a foundation for continued biological awareness of the body and for understanding the importance of maintaining health through good nutrition and exercise. The goal of a physical education program should be to make a lasting contribution to continued organic vigor and to a high quality of life and life satisfaction. (JD)

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Biological Awareness: The General P.E. Program

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A paper presented at the Second Mid-American College and University Physical Education Conference: The General Program. January 19-22, Chicago, Illinois.

As we came closer and closer to this conference I was more and more tempted to throw away my prepared paper and talk more as a concerned professional. Finally, I did. Let me begin by telling you what this paper is not. It is not a research paper. It is not a review paper, or a survey of the literature. This paper does not contain any content. This paper is a collection of thoughts by a Department Chairman at the University of Michigan. These thoughts are directed towards a segment of the profession of physical education called the general physical activity program. In many ways, what the physical education profession does in this segment of our colleges and universities is more crucial than anything else we do. Other segments are to a great extent self-serving (teaching "major" classes, research), but these activity courses are nearly pure service. What we do in the elective program (name used at Michigan) determines, to a large extent, the reputation of our profession for a decade. The student body in these programs will very likely be the societal leaders of tomorrow. These students are our future businessmen, parents, doctors, lawyers, and law makers. These students are our future voters. These students are the ones who will have opinions about the viability of the physical education contribution to society.

At Michigan we have a relatively small program (no credit and a pass-no record grading system). We serve approximately 3,000 students per year in 150 sections. We know that during the University years are one of our last chances to expose these students to physical education.

At Michigan we have written our goals and objectives for the next 5 years -- one of those objectives is to integrate the elective program into the mainstream of the Department. This integration is not to be by dollars allocated, not by faculty assignments, not by facility priority, but by course goals and objectives; including course content and range of experiences. I have become more and more concerned about (1) the student's awareness of his/her body and its potentials, and (2) the student's self-esteem.

In my opinion the most critical issue facing this conference is, does our mission drive our programs or are our programs driven by short-range "survival" concerns, such as student credit hour production, immediate student interests, instructor capabilities, etc.? The general physical activity program must have a mission that is relevant to the "educated" person. In my opinion, you should not and in fact, will not justify the general program on a self-serving rationale such as student credit hour production, or on team and recreational skills or on leisure and lifetime sports.

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I feel it is fair to say that during the past 50 years, the typical general physical education activity courses have not realized their potential to make a significant impression on American thought and lifestyle. I think we would all agree that Physical Education, as part of the curriculum or academic community, lacks general public support. This lack of support is manifested in the tenuous position of physical education in many public schools, colleges, and universities throughout the country.

Historically, our physical education activity programs have been slow to change and slow to meet contemporary societal interests and demands. You would be hard pressed to show evidence where the physical education activity programs actually have created societal demands. Within the past few years we have seen a change in the American society reflected in an increased interest in physical activity and a maintenance of organic vigor. How many adults have found out about exercise and health benefits through physical education classes? Why do adults have to wait until they become adults before they find out that being overweight or obese results in 80% increase in death risks? It is apparent to me that throughout the United States this renewed interest in physical fitness has not grown out of our typical physical education activity programs. It is very clear that the revival of interest in health and fitness can be attributed to research done by physical educators, psychologists, physiologists, the medical profession and others. These research studies have produced information regarding physical fitness relationships to "freedom from disease" and "quality of life". To stimulate and accomodate this most recent interest in physical activity there has been an increasing number of books to appear on the market regarding the roles of exercise and fitness in contemporary lifestyle. Not only have there been books specifically aimed at physical activity but other authors are incorporating physical concepts in health related models such as "degrees of wellness" "mental health", and "life satisfaction" topics. The role that physical fitness and nutrition will play in the coming decades of national health care remains to be seen but it is anticipated that physical activity care will be one of the major emphases of the new "preventive" approach to national health care.

The logarithmetic growth of health spas is another tribute to the increased awareness of physical activity in one's lifestyle and quality of life. Where are the physical educators? Are they ready to move or are they too locked into traditional programs? Fortunately, there is a ray of hope spreading rapidly throughout the physical education profession. Universities are adjusting curriculum, graduate programs are diversified and physical education programs as described in the most recent Journal of Health, Physical Education and Recreation are becoming more commonplace.

What I am calling for here is the return of the physical education profession to the original founding issues of the profession. Those issues were involved with the role of physical activity in the maintenance of organic vigor and exploration of the body. To be truly integral to the education of an individual, physical education must have relevance to the issues in life.

In my opinion, it would be highly valued to have adults say "I know I should do this because of the concepts I learned in physical education". We are never going to achieve this type of appreciation of physical education by teaching only team sports and we will never achieve this by only teaching life-time sports. Our primary goal should not be to provide only those motor skills necessary to "play the game" but our goals should be to provide a series of guidelines and knowledges that will provide the foundation from which the individual can grow and apply in his/her own future.

The basis of physical education should not be just skeletal muscle training but a whole course of proper direction and technique in body conditioning plus an appropriate series concerning sound biological awareness concepts. The concepts we provide through physical education classes should be applicable in the 1980's as well as the 1990's. The college freshman of 1978 will be the 40 year old adult of the year 2000. Are what you are teaching relevant to the educated person in the year 2000? I would like to stress that the success of an educational program should be judged by the lasting appropriateness of behavior and the present and future ability of the individual to make rationale decisions.

Given the re-evaluative thinking of preventive medicine and the projected advances in biology, including those answers in the adaptive mechanisms to stress, disease, and aging, I think it is particularly imperative that young adults be experienced in the way in which their bodies respond to stress. Because the public schools and universities reach nearly 70 percent of the population of the United States they are the obvious places to initiate programs that will allow individuals to discover, experience and understand their bodies.

The decade of the 1950's was considered the "fitness era" in the development of physical education. Is our population in better condition now as a result of the emphasis placed on fitness in our schools during that time? What type of fitness education will be needed for the 1980's and 1990's? The goal of the biological awareness approach is to allow people to learn the basic biological concepts about themselves to allow them to make intelligent choices about physical activity; they should be able to choose what is important to them about fitness, how to assess it, and how to program for it.

A new direction in the assessment and interpretation of fitness is needed. If a student is to utilize the knowledge of how fast he can run the 50 yard dash he must have some knowledge of the implications of speed. The biological awareness approach would make this possible. Furthermore, an evaluation of this parameter would be important as a guidance tool. Although the 50 yard dash seems to be an acceptable test to assess speed in professional sports, what of the high school or college student who has no desire to become professional athletes? Must they be subjected to a speed test year after year?

Biological awareness is then a process through which the student can

learn about his or her body and its response to the environment. Finding out how well he or she performs various activities is useful but only in developing the process, never as an end itself.

What does all this mean in terms of biological awareness and fitness? This approcah can be designed to sensitize the individual through a series of fitness and motor performance tests to his or her potential for success in a variety of activities. This means, however, that once an assessment has been made and interpreted there is little justification for re-testing unless the student decides certain parameters to be important to his or her own relative fitness profile. This approach also allows the student to make some value decisions that are experientially based on testing and biological awareness knowledges.

The integration of fitness considerations into lifestyles of individuals should be an important goal. To make fitness a viable concept of education, however, requires an enthusiastic approach. We must spend less time stressing and practicing skills and more time emphasizing through the skills how the body works and how it responds to the demands of the environment.

A person needs more than a "how to" approach to physical activity. It is the responsibility of any education and/or information transferring system to provide those basic concepts that have widespread applications and are not limited in their applicability. There are very few professions more fortunate than the profession of physical education. In physical education we are dealing with an individual's personal self and thus that individual has no greater level of interest and attention. We need to take advantage of this interest and motivation and move forward with meaningful concepts and avoid trivial time dependent details and sport activities that will become irrelevant within a few years.

It has become increasingly clear that men and women of all ages want to engage in physical activity programs (structured and unstructured). Hopefully, the profession of physical education will be responsive to these needs with a continued innovative and varied approach to physical activity. The words of President John F. Kennedy have been quoted quite often: "Physical Fitness is not only one of the most important keys to a healthy body, it is the basis of dynamic and creative intellectual activity. The relationship between the soundness of the body and the activities of the mind is subtle and complex. Much is not yet understood but we know what the Greeks knew, that intelligence and skill can only function at the peak of their capacity when the body is healthy and strong. That hearty spirits and tough minds usually inhabit strong bodies." The challenge for physical education is not only to make strong and healthy and physically fit school age and college age people but more importantly to provide those school and college age people with the tools and concepts to allow them to obtain and maintain a high physical fitness level in the adult and later years.

Biological awareness is an approach to physical activity that aids in an

individual discovering the personalized effects of physical activity upon his/her own body. This self-discovery approach will aid in an internalization of these concepts and will provide a growing record of an individual's response to exercise throughout a lifetime of physical activity. As is widely recognized, any concept can be taught at any age provided the approach is appropriate to the learner's background. There are many techniques that are available to physical educators for use with all age groups: demonstration, participating experiments, testing modules, discussion topics, lectures, and observations. For the purposes of this discussion I have chosen to illustrate several of these methods as well as for a variety of age groups.

1. It may not be appropriate to address early childhood audiences at this conference. However, I would like you to know that there is a slide-tape module available, utilizing the biological awareness approach, from V. Reggie Edgerton, Department of Kinesiology, UCLA, Los Angeles, California 90024.

2. For adolescents and young adults, a direct testing approach can be used which would include strength analysis, body composition analysis, stress testing through the use of treadmills, bicycles, and/or field jogging tests. Other biological awareness approaches are the use of nutrition/physical activity recall records, orienteering and outward-bound types of activities, and the use of easily available biofeedback kits. Precise lecture/discussion sessions regarding cardiovascular disease and training theories have proven beneficial when not extended over long lecture periods.

3. For the adult population, specific tests of physical activity are not yet available that would demonstrate the optimal level of fitness necessary for healthful living. The present criteria that is most often applied is the freedom from cardiovascular disease. This has not been an easy question to resolve and the current approach has been to recommend a liberal amount of physical activity to aid in the prevention of cardiovascular disease. The primary tool for this stress testing effort has been through the use of biological awareness in the form of feedback from test results. A person is made aware of their individual test responses through the treadmill, bicycle, and/or jogging types of experiments. For improvement in the quality of life aspects of adult living biological awareness techniques that have been used include the aforementioned physical fitness testing results as well as time analyses, behavior modification, and life satisfaction indices.

4. Special biological awareness types of approaches are now being formulated for physical activity for the elderly. This continues to be an exciting area for physical education. The materials for the active people over age 60 are indeed geared toward biological awareness in that the immediate feedback is through the individual as the individual develops an awareness of his/her own body through physical activity. Joe Vaughn on our own staff at the University of Michigan has developed a workshop approach to Physical Activity for the Aged, and the National Association for Human Development

(P.O. Box 100, Washington, D.C., 20044) has developed a workshop format for a national fitness program for adult older people.

5. There is a population of adult professional people that through their work need to utilize a high level of physical fitness. The levels of physical fitness are becoming more definitive through the use of research techniques in testing of professionals such as firefighters, police officers, professional athletes, military and others. Identifying specific tasks and then assessing the individual's performance quality tests raise the professionals' awareness of their own biological function. By raising their biological awareness, suitable programs can then be developed to meet their needs.

6. Another special case of adult fitness is that fitness related to executive fitness. This is a large population of adults that are dealing with a combination of physical inactivity and high stress. Most of the techniques supplied by business and industry to aid executives falls into the biological awareness approach. These techniques usually include a preponderance of self awareness types of activities characterized by "getting to know thyself".

The primary biological awareness tools used in these types of programs have been the testing model and the nutrition/physical activity recall records as well as biofeedback, relaxations, and exercise program participation. Especially useful has been the proven exercise stress testing and body composition analyses. Another type of biological awareness approach that has been applied to executives is the use of a prepared tape recording on a topic such as learning about cardiovascular disease and stress and the role of physical activity. A second technique is that of a short slide presentation that first of all establishes the nature of the disease, the probability of the disease and the economics of the disease. A third alternative technique is the use of short questionnaires that establish individual risk profiles. Such pencil and paper tests are available to assess cardiovascular risk factor probability, type A and type B personality tests, nutrition-physical activity recall records, and anxiety personality tests.

The corporation benefits to be derived from a health and fitness program are to minimize cardiovascular risk factors in executives, maximize psychic energies, increase job satisfaction, decrease health care costs, increase work performance, diffusion of job related stress, lower recruiting and training costs, enhanced employee loyalty, and retention and increased employee benefits. Corporations are now beginning to look at the cost of equipment maintenance in relation to human service maintenance. By putting these on a cost accounting budget sheet, top management is realizing the advantage of investments in the human maintenance perspective.

I hope it is obvious from this presentation that the purpose of the biological awareness approach is to educate oneself in the functions of his/her body and to be able to realistically appraise one's own physical status at one point in time throughout their lifetime. Hopefully, we will instill a sense of a continual learning attitude that will be constantly

stimulated throughout the lifetime of an individual. The biological awareness approach gives the physical educator a tool to be used that will provide relevancy for the learner throughout a lifetime. Physical Education should make a lasting contribution to a continued organic vigor and to a high quality of life and life satisfaction.